

Expand universities now, AUT says

by Judith Judd

The number of students in universities in the 1990s could be almost twice that estimated by the Department of Education and Science, according to the Association of University Teachers.

In its response to the DES discussion document *Higher Education into the 1990s* the AUT says that four developments could prove the DES wrong.

These are a rise in the number of late entrants (age 21 to 25) and of mature students (age over 26), a lengthening of many courses from three to four years and more students from working-class homes.

In its paper to be presented in the AUT Council in Birmingham today the association says that the university populations in 1988-89 and 1995-96 could be as high as 520,000 and 600,000.

The comparable DES projections are 325,000 and 280,000.

However, the paper says these numbers can only be achieved if the Government takes positive steps to encourage a wider spectrum of the population to enter higher education.

"Let there be no mistake: the country has a great opportunity - but unless it provides the resources there can be no expansion of the universities."

The paper says universities should think now about expanding into new areas. The demand from women and working-class students should perhaps not be held back until traditional pressure for places starts to slacken in the late 1980s.

"By the same token the curve

of demand from mature students is already rising and should not be artificially restrained."

If the N and F examinations are introduced students will probably be less well-qualified in the specialist sense and degree courses in science and language will have to be lengthened.

The paper emphasizes the importance of research and says that the number of students should not be the sole determinant of expansion or contraction.

"From a research point of view it might be all to the good if there were fewer students in 10 years or so and therefore more time. But since numbers will in fact increase, the provision of research time becomes more important."

In reply to the discussion docu-

ment's 14 questions the AUT advocates the active implementation of the Robbins principle among groups who have not yet taken advantage of it.

It also suggests that universities should work towards a staff/student ratio of 1:6 and that the ratio of postgraduates to undergraduates should be increased.

It opposes the use of temporary staff and accumulation. "It is essential for the quality of teaching and research that there should be a proper career structure as much in the eighties as at any other time."

On the use of longer terms as temporary expedites, it says that this would undermine the quality of basic undergraduate teaching and reduce the output and standard of research.

Protect research from 'productivity' deals

Universities must resist the suggestion that research be concentrated in centres of excellence, Dr Cecil Wells, president of the Association of University Teachers, said yesterday.

Dr Wells warned of the need to protect research in his opening address to the AUT's council in Birmingham.

He said: "We must beware of pseudo productivity deals which result in the loss of funds and time for research."

"We must beware also of moves, already strongly present in the scientific world, to cut down fundamental research in the home in favour of applied research: the latter should be done largely in industry by personnel paid at the

proper rates and not by cheap postgraduate labour in the universities."

"We must beware of suggestions that research will be aided by concentrating it all in selected institutions: here lies the sure way towards centrally directed projects with little freedom for individual initiative; as well as the corollary that other institutions must, therefore, concentrate on undergraduate teaching."

The Department of Education and Science appeared to think of a university as a rather advanced high school.

Nowhere in the DES discussion document *Higher Education into the 1990s* was research mentioned.

Earlier, Dr Wells spoke of the proposed sanctions over the teachers' pay claim which was settled a fortnight ago.

He said some vice-chancellors believed that he and he alone had imposed sanctions on reluctant members but it was the actions of the Government which had pushed academics to this extreme position.

The Government would live to regret it. "Academics once having gained themselves into action will probably arrive at the end of their tether sooner rather than later in the future."

He said that without the solidarity of the membership the DES would not have presented them quite so suddenly with this option previously given only in the firm-

Dr Wells wants pay to catch up with inflation

The AUT will try to restore the differentials between its members and the rest of the community in next year's pay claim.

Dr Cecil Wells, the association's president, told its council in Birmingham yesterday that losses incurred by university teachers because of inflation ranged from 13,000 to 19,000 according to grade.

The council was due to consider an executive motion which recognized that the new pay scales agreed for October last year do not compensate for the erosion in value of salaries.

The motion asked the executive to prepare a claim based upon the movement of average earnings since October 1974.

Now that the union has settled the association will certainly decide to press its policy to get the machinery for salaries changed.

A motion from Liverpool discussed at this week's conference the executive to give notice to the DES of the AUT's intention to bring a claim for a pay rise of 10 per cent.

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Non-teaching staff call in TUC

by Judith Judd

Unions representing non-teaching staff in universities have called in the TUC in their fight to secure a national grading appeals system.

The Universities Committee on Non-Teaching Staff also called in the TUC in the Commons on industrial relations in universities.

The universities have said they cannot agree that staff should have the right to go outside to a national appeals system. They say that this would be an infringement of university autonomy.

The Arbitration, Conciliation and Advisory Service held several meetings to bring the two sides together but has so far failed to do so. The unions say that unless universities agree to go to arbitration they will campaign through MPs for a change in the present arrangements.

They are anxious to secure the appeals system for about 22,000 clerical staff. Mr Rodney Hickson, staff of the National Union of Public Employees, said staff would be the system "as a matter of natural justice".

Now that the union has settled the association will certainly decide to press its policy to get the machinery for salaries changed.

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Higher Education SUPPLEMENT

May 26, 1978 No 341

Pressure from Labour to bring universities under Oakes body

by Peter David

The Government is under pressure from the Labour Party to make a selection process that it will bring the universities under closer national control.

At a meeting this week with Mr Oakes, Minister of State for Higher Education, the party's science and education subcommittee said that universities should eventually come under the new national body for higher education in the public sector, proposed in the Oakes committee report on college and polytechnic management.

The subcommittee, which is chaired by Miss Joan Lester, MP, points out in a confidential report that Labour's programme calls for an end to divisions in control, funding and facilities in higher education.

"We believe that to achieve long-term integration within the national body, the subcommittee has requested that as a first step the Government declares its intention to integrate the universities within the national machinery."

But in discussions with Mr Oakes, members of the committee made it clear that they envisaged the incorporation of the universities as a gradual process taking years.

As a first step the University Grants Commission would be asked to conduct a joint review of higher education provision with the new national body.

Later there would be experience in joint funding and eventually the TUC would be brought within the national body.

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CDP attacks finance revelations

Clive Jenkins, 9

Mr Jack Butterworth, vice-chancellor of Warwick University, and chairman of UEMS, said it must be remembered that the claim for a national appeals system came only from clerical staff. Among the many other university staff there was no wish for it.

The appointment of a national appeals system was a necessary condition of the nature of their work. As independent bodies they had developed good local systems for dealing with individual appeals. "It is our contention that these systems work well and should be continued and, in collaboration with the unions should be improved where necessary."

The clerical unions were trying to import into the university system a form of appeals structure worked out in a wholly different field, with local authorities.

He believed that decisions about individuals were more likely to be just if they were taken within an institution where there was particular knowledge of them and the circumstances. Universities' experience was that national appeals frequently brought a distortion element into settlements.

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AUT COUNCIL

20 per cent pay rise is the aim

Reports by Judith Judd

University teachers will seek pay rises of around 20 to 25 per cent, the Association of University Teachers decided at its Council at Birmingham University last week.

The Council passed a motion instructing the executive to prepare a claim for this autumn based on the movement of average earnings since October 1974 and noting that the scales agreed for October 1 last year do not compensate for the erosion of lecturers' salaries since the 1975 arbitration award.

Dr Peter Tiley, chairman of the salaries and grading committee, said the claim would restore the value of university teachers' salaries compared with other members of the community. It would mean that someone in the top of the lecturer scale would receive a salary of around £10,500.

and the average professor's salary would be £15,500.

"The claim is based on the average earnings index which has risen by a percentage far greater than our salaries have, even with the new agreed scales," said Tiley. "Earlier this month the Government agreed to put right the lecturers' pay anomaly in two approximately equal stages, starting this October."

The detailed way in which the anomaly will be righted has yet to be worked out. Tiley agreed that as many lecturers as possible should have the whole of the pay anomaly put right and that everybody should get about half in the first stage.

Dr Tiley said it was desirable to get the new salary scales into operation as soon as possible since nobody knew what the next stage of incomes policy might be.

The Council's decision, if agreed by the Department of Education and Science, will mean that the worse paid will receive a bigger in-

crease this autumn than the rest. Those at the top of the scale will receive around 15 per cent of the rectification in the first stage.

Mr John Reilly, an executive member from Kent, said that to people at the bottom of the scale, having the whole anomaly put right this autumn might mean the difference between getting a mortgage or not.

Dr Andrew Taylor, an executive member from Liverpool University, argued for an equal distribution of money throughout the profession. The amounts of money received at the bottom of the scale would be very small. If everybody received 50 per cent of the award in October the worst paid would get about £157 and the best paid £471.

The means by which the anomaly money should be paid has yet to be agreed with the University Authorities Panel, which represents the universities in pay negotiations. The two sides meet next week.

Move for early retirement

The association is in press for an early retirement scheme along the lines of that offered by civil servants. A working party set up by the AUT and the UVP has drawn up proposals and is waiting for a response from the DES. The proposals are designed to deal with lecturers who wish to retire at 50 or later.

Kenya ban imposed

Council instructed officers to advise members not to apply for jobs at Nairobi University without first discussing the situation there after the detention without trial of Ngugi wa Thiong'o, head of the department of literature.

£1 cut refused

Council decided not to discuss a motion from the DES that the salaries of the association's full-time officials should be reduced by £1 a year.

Safety act 'a threat' to research

The Health and Safety at Work Bill will stifle research, Dr P. L. L. Gill, from Bristol University, told the Council. He said the Act would set up a protection agency which could become a cumbersome and stifling.

A speaker from Nottingham said it had cost the university £500 to bring its buildings up to standards of the Act.

However, Council rejected a motion saying that the Act was expensive to implement and causing interference with the normal operation of universities, achieving little improvement in safety standards.

Mr John Akker, the AUT's general secretary, said the Act was a comprehensive law for all educational establishments. There had been case people who had contracted to trial diseases in universities. The AUT had been pressing the Health and Safety Commission to put the universities in a position to now with the printers.

Later in the debate about conditions of service, Council agreed a motion from Warwick expressing its concern about the refusal of the National Association of Probation Officers to make a necessary requirement for all those obtaining the Certificate of Qualification in Social Work before the age of 25.

A motion was passed instructing the association's training committee to represent on the Central Council for Education and Training in Social Work to resist such moves.

Mrs Christine Wadcock of South Wales and an association representative on the council, said: "Social work needs people who have some grasp of the meaning of unemployment, of poor housing, of inadequate incomes, people who can understand what it is like to be discriminated against. Surely four years' higher education leads

to a cushioning against hardship rather than an appreciation of it."

NAPPO's training committee has been sceptical about the recent proliferation of four-year degrees in social work, particularly as many officers feel that the social work component has often been less than that of one or two-year COSW courses.

Post-qualifying training to enhance skills was, in Mrs Wadcock's view, far more likely to have lasting impact upon the quality of service to clients than a tedious requirement of four years' unspecified higher education for younger entrants to social work.

Mr John Hutchings, the association's officer representative on the council, said that its consultative document suggested that it should move towards a minimum of four years' appropriate higher education, including social work training, for those under 25 starting a professional training course.

It pointed out that the expectation was more common in many other countries.

Mr Ron Edmunds, from Glamorgan, said the Council had the problem facing members.



Mr Laurie Supper—general secretary of the Association of University Teachers.

Opposition to wage restraint agreed

Council agreed to call on the TUC to oppose further pay restraint until prices had been effectively controlled and the position of employees restored.

It passed a motion from Leeds University which said: "Council recognizes that in the absence of any significant control of prices and interest rates, the successive stages of Government pay policy have been fraudulent and have produced the economic position of wage and salary earners, especially those in the public sector."

Mr Robert Price, an executive member from Warwick, said that groups which had no means other than their basic salary were discriminated against very unfairly under recent pay policies.

Governments had only to buy off

a few key negotiating groups while public sector groups suffered much more. University teachers had received a 9.8 per cent increase this year but the miners had received a productivity deal which would give them another £1,000 a year. However, a union from Warwick opposing any further stage of incomes policy after August was defeated.

Council agreed to give notice to the Department of Education and Science that it wanted to change its pay negotiating machinery.

At present there are two stages. A committee A which has representatives from the AUT and the University Authorities Panel, and Committee B, which includes the AUT, the UAP and the DES. Committee A has to agree whatever claim is put in Committee B. It is AUT policy that there should be a single-stage

negotiating machinery.

Mr Laurie Supper, the association's general secretary, said they were in the invidious position of having to join the employers in going to the DES and asking the case again. He knew of no other trade union which was in this position.

He said the executive would like machinery modelled on the Burnham committee where negotiations about pay for teachers in the public sector are carried on.

He was envisaging a single-stage machinery with the AUT on one side and a management panel consisting of the universities as employers and the DES.

A motion instructing the executive to investigate during the salary settlement date, October 1, to that of polytechnic and other teachers, April 1, was also approved.

Overseas and General Vacancies

CHIEF EXECUTIVE

Adult Literacy Support Services Fund.

The Fund is a non-profit making organisation financed by charitable contributions, staffed by a General Manager and 7 assistants, and based in West London. Set up in 1976 to support Adult Literacy work throughout the U.K., it has been closely associated with the Adult Literacy Resource Agency and the BIR's Further Education Departments, and it has links with related operations in Scotland, Wales and Northern Ireland.

At present the Fund runs postal and telephone referral services which put would-be literacy students and volunteer tutors in touch with the relevant LEA officer; promotes (and trains) activities connected with the use of broadcasting; fosters research into aspects of book design and typography; and commissions and publishes resource material.

As its work develops, the Fund plans to co-operate more extensively with the mass media - newspapers, magazines, and all forms of broadcasting at national and local level - and will support media activities aimed at improving not only reading and writing skills but also other basic skills such as the ability to comprehend and use numbers and to communicate in English.

The Chief Executive will be managerially accountable in the part-time Board of Directors for the working of the Fund, for the development and extension of the Fund's work and for the conduct of fund-raising activities. The successful applicant for this new post is likely to have extensive experience of adult education, gained either as a tutor in administration or through related work in the mass media. Applicants should have administrative abilities as well as the entrepreneurial and imaginative qualities that will enable the Fund to continue making fresh contributions to adult education in the U.K.

A salary of about £8,000 p.a. is being offered on a contract for two years in the first instance.

Applicants should write, including curriculum vitae, by 12th June 1978 to:

The Secretary, Adult Literacy Support Services Fund, 133, Rus 7, London W5 6J3.

Educational Technologist IRAN

c. £9,050 + £2,392 gratuity

Millbank Technical Services operates exclusively in the supply of electronic equipment, technical support and major engineering projects to overseas governments. They have a contract to supply staff to the Military Technical High School at Majed-Suleiman in the Altwaz/Abadan area of Iran.

The Educational Technologist must be a qualified male teacher with either a Diploma in Educational Technology or with passes in those parts of the course related to Resource Centres and Closed Circuit Television. Experience with Language Laboratories and a qualification in TEFL highly desirable.

Salary is £9,050 p.a. plus a gratuity of £2,392. The contract is from September 1978 until July 31, 1980.

There are generous allowances including accommodation.

Please write with full details to Mr. A. K. Mitchell at the address below.

Millbank Technical Services Limited, 4 Abbey Orchard Street, London, SW1P 2JF.



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The College of Law invites applications from solicitors for lectureships at the College in London, Guildford or Chester. The salary will be within the scale £4,785 to £8,004 per annum plus, where appropriate, a London or Guildford allowance with the entry point depending on qualifications and experience. Normal annual increments are £288.

Apply with full personal, professional and academic details and the names of two referees to the Director, The College of Law, 25 Chancery Lane, London WC2A 1NL, from whom further particulars may be obtained.

The INSTITUTE OF SOCIAL STUDIES, The Hague, is inviting applications for the post of:

SENIOR LECTURER IN THE FIELD OF THE ROLE OF WOMEN IN DEVELOPMENT (Female)

The person appointed will be responsible for developing the Institute's teaching and research activities in this field of study and for the promotion of the Institute's work in developing countries, with particular reference to policy issues.

The candidate is expected to have had relevant academic experience. Active involvement in this field, including work in a developing country in teaching, research or consultancy, would be desirable.

Organisational capacities and the ability to work in a multi-disciplinary team are essential.

Teaching will be in post-graduate programmes; the participants mostly coming from developing countries. All teaching is done in English.

Salary according to Dutch university regulations up to a maximum of Dfl. 6,841 per month.

Applications accompanied by a curriculum vitae and names and addresses of three referees are invited by the Director, Institute of Social Studies, 251 Badhoevop, The Hague, before June 15, 1978, mentioning the letters W.P.

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Reform of social work courses attacked

by Peter David

Social work lecturers have reacted bitterly to a report from the Central Council for Education and Training in Social Work calling for a reduction in social work courses, sociology and other social sciences. Lecturers at Warwick University described the report as social work's "Black Paper" and linked it with Professor John Giddens' report on Marxism in higher education.

The CCETSW report was published last year as a consultative document on the future content of social work courses in universities and polytechnics. In an introduction, the council's director, Miss Priscilla Young, said that a clearer purpose was needed by social work lecturers who were their own, sometimes "divergent, objectives."

In the report Mr. Reg Wright, the council's assistant director, said that social work might have to disengage itself from sociology. The concentration over the past decade on large-scale social problems had

diminished the amount of time social work courses spent on individual social work skills.

He criticised lecturers who sought an all-embracing theory of social work, and attacked social workers who substituted "a phoney initial egalitarianism" for professional discipline. "Action in change social policy," said Mr. Wright, "is a political action and outside the daily responsibility of the social worker but not of their responsibility as members of the profession or as citizens."

In a pamphlet, published this week, staff at the department of applied social studies at Warwick University say that the CCETSW report is part of current attempts to overturn progressive forms of education. They argue that the report is reminiscent of American curriculum documents published during the 1950s and 60s, the same kind of confusion between description and prescription, the same indifference in what is actually going on in the field; the same boundless language.

"His overall purpose, too, seems to be the same," claims the Warwick pamphlet. "To ensure that validating bodies increase their control over courses, so that social work will in no way threaten existing institutions or currently dominant ideas."

By focusing on individual case work, says the pamphlet, the CCETSW document defends a "crumbling and conservative" set of beliefs in social work and denies "the essentially political nature of social work ideas."

The CCETSW report has also been criticised by the British Association of Social Workers. In a response submitted to the council, BASW says: "If sociology is believed to be making an undue influence on social work, courses (and where is the evidence for this?) must argue that this is an important and valuable development."

It might reflect the increasing belief among many sociologists that their knowledge and scholarly research should be applied more

directly to problem solving in contemporary society."

The BASW submission also takes issue with the claim in the CCETSW report that action in change social policy is outside the daily responsibility of social workers. "Our view is that local social policies and the organisation and administration of social welfare services are within the daily concerns of the social worker," says the association.

It also rejects CCETSW's allegation that generalist education in social work courses has reduced the emphasis on learning social work skills. Many courses, BASW points out, have used audio-visual aids and laboratory experiments to enhance the practical skills of social workers. A spokesman for the CCETSW said this week that responses to the consultative document had been received from a number of institutions and would not be ready for publication until the autumn. Miss Young emphasised that the report had been intended to stimulate debate and not in outline official council policy.

Hint of longer validation period for CNAA degrees

The Council for National Academic Awards may move towards a more flexible validation period for its courses, with some receiving approval for up to eight years, Dr Edwin Kerr, CNAA's chief officer, told a conference at Middlesex Polytechnic, Trent Park, last week.

Addressing the Standing Conference on Education Development in Polytechnics, he said the council's proposals for giving more responsibility to institutions for course validation - starting with the document *Partnership in Validation* - had not been well received. But he thought that there was likely to be widespread support for a move towards greater flexibility in the validation period.

Dr Kerr also touched on the role of course development teams in course design and the course team in monitoring the progress of a course. This collective involvement of staff was one of the important things the CNAA had contributed to course design. Even so, it was important to establish a correct balance between policy-making committees and the executive role of individuals. In some instances, the balance needed to be redressed to give more emphasis to the role of executive staff.

The council was still committed to a "holistic view of courses" and this, he recognised, posed problems with large interdisciplinary courses and with credit accumulation schemes. But the CNAA felt that study programmes must be balanced and coherent.

Dr Kerr said that he was concerned that course schemes were submitted in elaborate detail with a mass of paperwork, although the council had tried to encourage institutions to cut down the size of their proposals.

The question of the increasing number of mature students wanting higher education would have to be tackled soon.

There was also the problem of the stable group of students who would formerly have gone into colleges of education without any A levels, but now did not have an easy route into higher education.

A warning that the third phase of the industrial revolution was near and that higher education would not escape the pressures brought about from Mr Geoffrey Hubbard, director of the Council of Educational Technology.

Referring to the DES "Brown Paper" on the future of higher education, he said: "The administrators and the politicians may do what they please but it is important to look at it from the view of students. We will need to re-examine the boundaries of further and higher education."

In a world where only an elite would have work it could be necessary to return to the style of the 18th century gentleman, whose life was laid out in a pattern of work, leisure, learning and sleep.

Probation officers against four-year HE training

Probation officers are worried that higher education cushions social workers against the harsh realities faced by their clients. That was part of the argument put at the society's annual conference of the National Association of Probation Officers against proposals to make four years higher education a necessary requirement for all those obtaining the Certificate of Qualification in Social Work before the age of 25.

A motion was passed instructing the association's training committee to represent on the Central Council for Education and Training in Social Work to resist such moves.

Mrs Christine Wadcock of South Wales and an association representative on the council, said: "Social work needs people who have some grasp of the meaning of unemployment, of poor housing, of inadequate incomes, people who can understand what it is like to be discriminated against. Surely four years' higher education leads

to a cushioning against hardship rather than an appreciation of it."

NAPPO's training committee has been sceptical about the recent proliferation of four-year degrees in social work, particularly as many officers feel that the social work component has often been less than that of one or two-year COSW courses.

Post-qualifying training to enhance skills was, in Mrs Wadcock's view, far more likely to have lasting impact upon the quality of service to clients than a tedious requirement of four years' unspecified higher education for younger entrants to social work.

Mr John Hutchings, the association's officer representative on the council, said that its consultative document suggested that it should move towards a minimum of four years' appropriate higher education, including social work training, for those under 25 starting a professional training course.

It pointed out that the expectation was more common in many other countries.

Mr Ron Edmunds, from Glamorgan, said the Council had the problem facing members.

Fowler warns on 1982 target

The Government's estimate of 250,000 students in public sector higher education by 1982 will be off target, Mr Gerry Fowler, former Minister of State overseeing higher education, warned last week.

He told the Association of Polytechnic Teachers that the university sector was highly planned and had realistic its allocation projected at 310,000. But in the main, he said, the numbers could be by up to 40,000 either way. They would be used as the "cushion" for the shock absorber "if the DES projections were wrong."

Speaking at the AUT annual conference in London, Mr Fowler said that if the binary line was

abolished the polytechnic sector would start imitating the universities.

On the Dares report, Mr Fowler questioned the competence and expertise of the local education authorities to continue to run the polytechnics and full-time higher education in the sector.

He warned that the system of finance suggested by Dares - involving the channeling of annual finance to maintain higher education institutions through a national body and 15 per cent through the college's local education authority - was going to fill some authorities hard.

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Duke sees mobility aids for children with disabilities



The Duke of Edinburgh met this young man in a hurry among some other severely handicapped children who received mobility aids designed at Queen Mary College, London when he visited the college's department of mechanical engineering last week.

Complete list of Universities' recurrent grants

The complete list of universities' recurrent grants announced last week is as follows. Mr Dares, minister of state for higher education, gave the figure in a written Parliamentary answer.

University or College	Recurrent Grants	Grant	Grant
		£100,000	£100,000
Aston	...	1,300	1,300
Birmingham	...	1,300	1,300
Bristol	...	1,300	1,300
Cardiff	...	1,300	1,300
Cambridge	...	1,300	1,300
Canterbury	...	1,300	1,300
Exeter	...	1,300	1,300
East Anglia	...	1,300	1,300
Leeds	...	1,300	1,300
Leicester	...	1,300	1,300
Liverpool	...	1,300	1,300
Loughborough	...	1,300	1,300
Manchester	...	1,300	1,300
Nottingham	...	1,300	1,300
Oxford	...	1,300	1,300
Sheffield	...	1,300	1,300
Southampton	...	1,300	1,300
Strathclyde	...	1,300	1,300
Sussex	...	1,300	1,300
Warwick	...	1,300	1,300
York	...	1,300	1,300
University of Wales	...	1,300	1,300
Abertawe	...	1,300	1,300
Cardiff	...	1,300	1,300
Exeter	...	1,300	1,300
Leeds	...	1,300	1,300
Leicester	...	1,300	1,300
Liverpool	...	1,300	1,300
Loughborough	...	1,300	1,300
Manchester	...	1,300	1,300
Nottingham	...	1,300	1,300
Oxford	...	1,300	1,300
Sheffield	...	1,300	1,300
Southampton	...	1,300	1,300
Strathclyde	...	1,300	1,300
Sussex	...	1,300	1,300
Warwick	...	1,300	1,300
York	...	1,300	1,300
University of Wales	...	1,300	1,300
Abertawe	...	1,300	1,300
Cardiff	...	1,300	1,300
Exeter	...	1,300	1,300
Leeds	...	1,300	1,300

RESEARCH

Answer sought to vaccine damage

by Maggie Richards

An attempt to eliminate the potentially damaging side effects of whooping cough vaccine is being made at Glasgow University.

The Medical Research Council has provided £11,214 in finance. The study is being undertaken by Professor Ainslie Wainman of the university's department of microbiology, in conjunction with Dr H. Furman of Strathclyde University.

Whooping cough vaccine is alleged to cause convulsions and brain damage in some children and alarm about the vaccination has led to a serious reduction in the number of children being immunized.

And there is now thought to be

a serious threat of the disease again becoming widespread in Britain.

By examining different batches of vaccine, the study will try to discover any differences in the effects they have on blood glucose and insulin levels in mice.

It is hoped that if differences are found, it may be possible to identify and eliminate particularly reactive batches.

Earlier experiments with mice and rats revealed that a massive secretion of insulin from the pancreas into the blood stream followed vaccination by killed, at five whooping cough bacteria.

Insulin is the hormone controlling the amount of glucose in the blood. Increasing the amount of

insulin causes a drop in the level of glucose, which can result in convulsions and, if sufficiently severe, can lead to brain damage.

There is some evidence that an increase in insulin levels occurs in the blood of humans after whooping cough vaccination. Studies completed several years ago showed that patients with whooping cough tended to have lower than normal levels of blood glucose.

The present study will look at different batches of vaccine made by different manufacturers, and batches made by the same manufacturer at different times.

Until now there has not been a direct comparison of the behaviour of different vaccines in producing glucose and insulin changes.

Drug abuse in sport study centre set up

by Robin McKie
Science Correspondent

Britain's first centre for the control of drug abuse in sport is to be set up at Chelsea College, London, this summer.

The project is being backed by the Sports Council with £25,000 a year towards its running costs and the college is also negotiating with other sporting organizations to raise grants for some of the capital costs.

The Drug Control and Teaching Centre will be directed by the college's head of pharmacy, Professor Arnold Becker, who is also a member of the International Olympic Committee and has been involved in drug analysis in sport for many years.

The college's pharmacy department has been involved in developing methods of analysis since the early 1960s, work which included extensive testing in the Tour of Britain cycle race in 1965 and the World Cup in 1966.

Testing has been carried out at the college since then, although no overall plan for drug control has been in operation. Recently, the department has also had difficulties in obtaining university funds for these tasks.

The only solution therefore was to set up a centre with its own staff and equipment with the prime purpose of carrying out drug control in sport and to develop methods of analysis for such control as new problems arise.

"The only solution therefore was to set up a centre with its own staff and equipment with the prime purpose of carrying out drug control in sport and to develop methods of analysis for such control as new problems arise," said Dr David Cowan, assistant director of the centre. The Sports Council was

approached and annual grants for the first three years of operation were agreed. Work is expected to begin in late July.

Dr Cowan said there were two divisions of drugs in sports. One was the use of drugs to enhance performance, such as stimulants, steroids, and anabolic agents, while stimulants were used to improve performance.

He believed that some athletes took drugs because they were not sure what their training was doing to them because they were not getting the results they expected. Many other competitors were giving them and did not want to be left out.

"We hope we can show athletes that other competitors are not taking drugs and that we will be able to educate them about the dangers of drug abuse," Dr Cowan said.

The practice is as widespread as some reports suggest, it is all due with extraordinary discretion, for none of the series of investigations by newspapers and federal and local officials has come up with conclusive evidence of an applicant, who would not otherwise have been admitted, gaining a place through financial inducement.

The most recent series of "admissions testing" cases in which the school was involved came to light in Pennsylvania last year as part of a wider political corruption scandal.

According to the evidence that came out in court, officials of state-related professional schools (medical, dental and law) gave key members of the Pennsylvania legislature the right to fill one or two places a year with candidates of their choice in exchange, the colleges got favorable treatment in the state budget.

The politicians—two of whom were later indicted for corruption—were given places for thousands of dollars, witnesses said.

The case was an unusual one, however, is centered on an allegedly common practice in private professional schools which may not be illegal at all, lawyers say, though it is certainly contrary to social justice.

The college admissions officers were the point of application where academic qualifications are near the bottom line, a large pool at the more prestigious institutions—and select those whose families are known or thought to be wealthy and well-connected to the school, it is claimed.

Very discreetly, they will make a list of the families who will make a place. The benefit goes to the institution rather than to the individual, so it is not a clear bribe.

A second allegation of this kind was made by the University of North Carolina in 1973, when a newspaper reported that the university's admissions committee was using a list of wealthy families to reserve places for their children.

Dr Sybil says his personal feelings, on the basis of many conversations with present and former medical school staff, is that such a situation is taking place on a considerable scale.

The bureau is currently investigating the admissions procedure of Chicago Medical School, where a court case some years ago brought to light solicitation during the admissions process.

Another possible subject of investigation is the University of California's Davis Medical School where a few places were allegedly reserved for the children of the influential.

Physician starts a clinic to combat 'science anxiety'

Includes fear of laboratory equipment and machinery. Many students feel they are missing the whole point of science, that there is a key that would make everything clear, whereas many see more in section. According to Dr Mallow, a student may have a complete mental block about, say, calculus, while feeling relatively comfortable about another area.

The first half hour of the session is a "relaxation and de-stressing" period conducted by the psychologist. The students are taught to relax their muscles while thinking about the aspects of science that make them most anxious. Each participant writes out his or her worst anxieties.

Although "science anxiety" is a well-known affliction suffered by undergraduates the world over, culture hardly ever treat it as a systematic basis.

Science educators in America deal with "negative" attitudes towards science, emphasizing the human side of physics or chemistry for students who are required to take some science but are not going to specialize in it.

An physician, Jeffrey Mallow of the University of Chicago, has been running a "science anxiety" clinic for the past year at the university's counseling center. Each session lasts an hour and a half.

In the first half hour the scientist teaches some of the skills of learning science: how to read textbooks, how to listen to a lecture, how to take notes, etc.

The second half hour is a discussion of shared experiences in science.

Dr Mallow says: "The students discuss their science anxiety and learn to separate the anxious difficulty of doing science from their own ego involvement. They learn to take each setback as evidence that they are not 'right'."

They also regain their powers of judgment—if a passage in a textbook or lecture seems unclear, they question the clarity of the writer or speaker.

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Although science anxiety clinics may seem an extensive way of dealing with the problem, Dr Mallow insists that they are better value than letting really bad cases seek help through the normal counselling services.

Approach, with students learning from one another's anxieties, is more effective than individual counselling.

Loyola runs about six clinics a

North American News

Clive Cookson, our North America correspondent, reports from Washington on two areas where doctors' training seems to be badly in need of treatment

Parents 'buying medical school places'

American medical schools are currently facing a new wave of accusations that they systematically "sell" places to children of the wealthy and well-connected in exchange for donations.

The story joined an angry denial from Dr Siller that he had been planning to sell admissions. He said his "indulgences" remark was made as was that of a university trustee who said he demanded \$50,000 for getting a boy into law school.

Since then neither Dr Siller nor anyone else has produced any evidence of any student being admitted on condition that his family make a gift.

Of course, nearly all American academic institutions try to solicit gifts from their students' families, and medical schools try harder than most because of the large gap that usually exists between their tuition fees and the enormous costs of medical education. (Also, medical school alumni are less generous than most other groups of graduates with gifts to their alma mater, according to Charles Fennell of the Association of American Medical Colleges.)

Sometimes the first request for a gift comes almost immediately after the son or daughter is accepted, raising the suspicion that the college may have known before the place was offered that the particular student would be a good prospect financially—but that is a different matter from extracting the promise of a contribution before making the offer. Anyway, every well-run medical school insists that its admissions process is wealth blind.

Federal officials in the Department of Health, Education and Welfare are currently considering whether and how to carry out a general investigation of allegations that medical schools are selling admissions to wealthy families.

Health Manpower says the bureau is discussing possible action with departmental lawyers and HEW's Inspector-General.

Dr Sybil says his personal feelings, on the basis of many conversations with present and former medical school staff, is that such a situation is taking place on a considerable scale.

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Report urges end of family doctor shortage

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Canada aims to find jobs for graduates

Job creation has taken on a new dimension in Canada, where the Federal Government has announced a project to subsidize firms that make work for unemployed science and technology graduates.

The Scientific and Technical Employment Programme (STEP) follows criticism of the Canada Works Programme, the country's main employment scheme, on the grounds that it was doing nothing for the long-term development of Canada. The Department of Employment and Immigration responded by earmarking an economic growth component of its job creation funds, part of which will finance STEP.

According to Mr Judd Buchanan, the Minister of State for Science and Technology, the programme will directly create 400 jobs at a cost of \$5.5 million a year, but it is expected to give rise indirectly to another 1,200 jobs.

The Government will contribute up to \$8,000 towards the salary of each recent science or technology graduate employed. This ceiling will rise to \$14,000 in cases where the company can persuade the National Research Council (which is administering the programme) that the project on which the graduate would be working would generate other new jobs.

Graduates of universities and community colleges in all areas of science, engineering, mathematics and technology are eligible, though preference will be given to certain fields, including physics, chemistry and biology, where graduate unemployment is highest. Companies' applications for STEP grants will also be judged on the basis of technical merit, likely returns, and the probability that permanent jobs will be created.

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Taking the lid off peas and their diseases

by Peter Davil

The University of East Anglia has been awarded £42,000 from the Agricultural Research Council for a collaborative programme of research by plant scientists in the university's School of Biological Sciences and a team of geneticists from the affiliated John Innes Institute.

The programme began when the John Innes team under Professor D. R. Davies developed varieties of cultivated peas which had no leaves and which depended on photosynthetic stems and tendrils for their growth. The new varieties are producing a higher yield than normal.

Further improvements in crop yield are expected, but longer term developments will require more fundamental knowledge about the physiological factors which affect yield. This will be the job of the university group, which will aim to develop simple techniques by which plant breeders will be able to test whether the individual progeny resulting from a breeding programme have the desired combination of characters.

The group includes all nine members of the academic staff involved in teaching plant biology. With experts in plant physiology, plant biochemistry, biophysics, agricultural plant pathology and plant breeding it is one of the leading research teams in the country.

Of the two grants made by the ARC the largest has gone to Professor B. F. Folkers and Dr A. P. Sims for work on the nitrogen nutrition of peas. The project includes a fundamental investigation into the relative importance of various natural sources of nitrogen for the growth of pea crops. But a major effort will also be directed at discovering why the fixation of atmospheric nitrogen ceases.

The second grant was awarded to Dr J. G. Turner for work on *Ascochyta blight*, one of the major fungal pathogens of cultivated peas. The aim of the research is to identify the ways individual pea varieties resist attack by the pathogen.

At present this is overcome by transporting power to the diver by a low voltage cable in by some other crude method such as heating by pressurized steam.

Now the Ministry of Defence, which is actively involved with deep sea diving, has increased its grant to the university's department of electrical and electronic engineering to continue their research. This involves devising a process where power is provided by microwaves travelling along the breathing gas pipe.



Keeping warm under water investigated at Newnarth.

North Sea problems tackled

Safer methods of providing heat to deep sea divers via microwave heating systems are under investigation at Newcastle upon Tyne University.

Divers face a serious problem in the heat of heat caused particularly by the breathing gas, a helium-oxygen mixture.

At present this is overcome by transporting power to the diver by a low voltage cable in by some other crude method such as heating by pressurized steam.

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The contract, for two years, is related to oil drilling rig operations in marine areas. Oil companies are to provide samples of North Sea glacial clays. The work will be carried out in close co-operation with the geotechnics division of the Building Research Establishment at Watford, and the department of civil engineering at Strathclyde University.

Another research project in the North Sea is being undertaken by the geology department at Aberdeen University, which has been awarded a grant of £6,610 for a three year study.

The aim is to examine ways in which the work of organic materials in hydrocarbons and coal materials in sediments under the North Sea may be linked with clay studies. It is hoped the results may provide all companies with a means of establishing during exploratory drilling whether the strata are likely to have produced oil.

A research student, under the supervision of Dr M. Pearson, will carry out the work. The grant has been awarded by Total Oil Marine Limited.

Now the quiet export boom

Engineers at Aston University have been given the task of keeping exports humming by producing some of them down.

The Department of Industry has placed a one-year research contract worth more than £20,000 with Aston, as part of a project involving Bath University, the British Hydro-mechanics Research Association and Government scientists.

Their brief is to question oil hydraulic machinery used to power earth-moving machines, tunnelling and mining equipment, fork-lift trucks and machine tools. The noise from such machinery needs to be reduced if it is to compete effectively in overseas markets.

Exports of oil hydraulic machinery earned £129m last year but foreign legislation on noise levels is threatening further sales. Recommended safe noise limits are already higher in Britain than in some other countries.

Research at Aston, under Professor Keith Foster, of the mechanical engineering department, will concentrate on larger power hydraulic machinery, providing design information on fluid pumps.

The unit will be self-financing in the hands of research or development contracts awarded by overseas bodies.

A new organization to promote the use of horticulture as therapy for handicapped people has grown out of research at the University of Bath.

The John Rowntree Memorial Trust has offered a £7,000 grant to give the scheme a three-year start under the provisional name of the Council for Horticultural Therapy.

The new organization will deal with therapy for all forms of disability and handicap. It aims to provide advice, information, training, as well as promoting the general use of horticultural therapy.

Its trustees will be: Dr Rowntree, chairman of the John Rowntree Trust; Sir Campbell Adamson, former director of the Council for Horticultural Therapy; Dr Peter Barclay, a solicitor; and Mr Theodore Sanger.

Its first director is Mr Chris Underhill, whose work in the university's horticulture group was instrumental in setting up the service. His research linked the benefits of crop cultivation for the mentally handicapped and included a survey of day centres run by local

Ship design in Wales

The first maritime research unit to be set up in a British university has been established at the University of Wales Institute of Science and Technology.

It will be backed by the departments of applied physics and maritime studies.

The unit has been set up because of increasing attention being paid by ship designers, operating on the human factors involved in maritime transport, especially those relating to safety, a university official said.

Its director is to be Dr David Anderson, who will be responsible for ensuring that three main objectives are achieved. These are: to undertake research into human factors involved in the design of ships; to answer problems run by organizations involved in ship design; and to publicize the results so that they may be used in maritime transport design.

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United Nations University hits money problem

The future of major research being undertaken by the United Nations University in Tokyo to find solutions to pressing global problems will be strongly influenced by the attitude of the United Kingdom to finance.

The United Kingdom's financial contribution to the university is of vital importance not only because of its intrinsic cash value but because it is needed as a catalyst in persuading the rest of the world to make good their pledges to the endowment fund. So far only a proportion of the \$500m target has been obtained.

Dr Alexander Kwang, the vice-rector in charge of planning and development, explained on one of the flying visits which have taken him and his colleagues to 20 countries, why the UNU is particularly concerned about the British contribution.

"It is because Britain still has tremendous leadership in all these matters and, if Britain does the right thing, it will have enormous consequences not only in Europe but in North America and also in the developing countries. A high contribution will achieve the maximum impact," he said.

Reaching the target figure is of enormous importance in ensuring the academic freedom of the UNU. It was felt that to guarantee this academic freedom some means must be found to safeguard the university's financial stability. Instead of the normal annual subvention given to other agencies, it was decided the UNU should be funded on a voluntary basis by member states.

The endowment fund would then represent capital which when invested would provide for basic expenditure. It was estimated that \$40m per annum would be required. At present the budget is \$9m.



Research on nutrition is one affected area.

Altogether 17 countries have contributed, the most generous being the Japanese, who have already given \$70m of the \$100m they have pledged. Japan has also provided the UNU with temporary headquarters in Tokyo where 70 staff are employed.

The industrialized countries have lagged in their payments playing a "wait and see" game to see what kind of institution emerges. Developing countries, far more excited at the prospect of this new venture, have been far more forthcoming, with Venezuela pledging \$10m and Sudan \$5m.

Norway, Sweden, Austria and the Netherlands have also made contributions but not to the endowment fund. Major United Nations countries such as the United Kingdom, United States, France and Germany have not even reached that stage, although Mr Kwang is now hopeful that they will do so.

The United States contribution was pledged some time ago but events such as the change of presidents blocked its progress towards Congress. Now it is expected that \$7.5m will be voted, a substantial shortfall from the originally agreed \$30m. The United Kingdom, too, is

finally showing signs that it is seriously considering paying but the extent of the sum is not yet known.

The UNU, known as the intellectual arm of the United Nations, is in fact a network of research and advanced training institutions around the world which has been given the mandate of identifying and solving problems of human survival, development and welfare.

Early in 1975 its governing body, a 24 member-council of distinguished academics from as many countries serving in their individual capacities selected three priority global problems for initial concentration: world hunger, human and social development, and the management of natural resources.

Already in the two and a half years of its operation, the UNU has linked together major research institutes in Latin America, India, the Philippines, Britain, Africa and the United States to work in these areas. It has also trained many academics under a scheme of UN fellowships. They are expected to bring their newly acquired knowledge to bear on problems in their home countries.

In the World Hunger programme, as indeed with the other two, major research needs were established after consultation with leading experts, thereby removing any chance of duplication and providing an integrated approach.

Four inter-related problems concerned with providing adequate nutrition have so far been under study: basic human requirements, just harvest food conservation, objectives in national development planning, and interaction between agriculture and nutrition.

This work is of immense importance, as is shown by the latest

World Health Organisation figures indicating that around 500 million people suffer from malnutrition.

Some of the major research taking place at the Institute of Nutrition in Guatemala (INCAP), of the first associated institution, involves working for early protein requirements of infants, preschool children in help to make the most favourable use of local diets.

The second sub-programme, dealing with post harvest food loss, is of equal importance, as in many developing countries, losses of up to 40 per cent of the food harvest are caused by pests and inadequate methods of storage and distribution. Work is being undertaken on associated insects. The Food Technology Research Institute at Mysore, India, which has a world-wide reputation for food preservation research in this area.

A fundamental principle of the Hunger programme is that it can be done to alleviate hunger, malnutrition and health problems with current economic resources.

One of the most interesting aspects of the third programme, the use and management of natural resources, has been the attention given to the energy needs of small rural communities, with a particular emphasis on solar energy.

It is perhaps the UNU's outstanding achievement has been to ensure that the ideal which went to the heart of the UNU is not allowed to be lost. Its resurgence in the world of the university may well be a way to reassess the world's cooperation between academic disciplines, background, political persuasions is possible.

Patricia Sadler

Polytechnics' finance explained in detail

The Polytechnic Finance Officers' Group has now decided to go ahead and distribute publicly its comprehensive 80 page report on the operating costs of Britain's 31 polytechnics—without the approval of the Committee of Directors of Polytechnics.

The report, which compares the actual operating costs for the 1976-77 financial year and the estimated total costs for 1977-78, examines both the wide variation in costs between the polytechnics and the change in trends in spending between this year and last.

It gives detailed information on the costs of academic staff, non-teaching staff, research, libraries, staff development and furniture and equipment. Detailed data on hospital expenses—where Liverpool comes top of the league in 1976-77

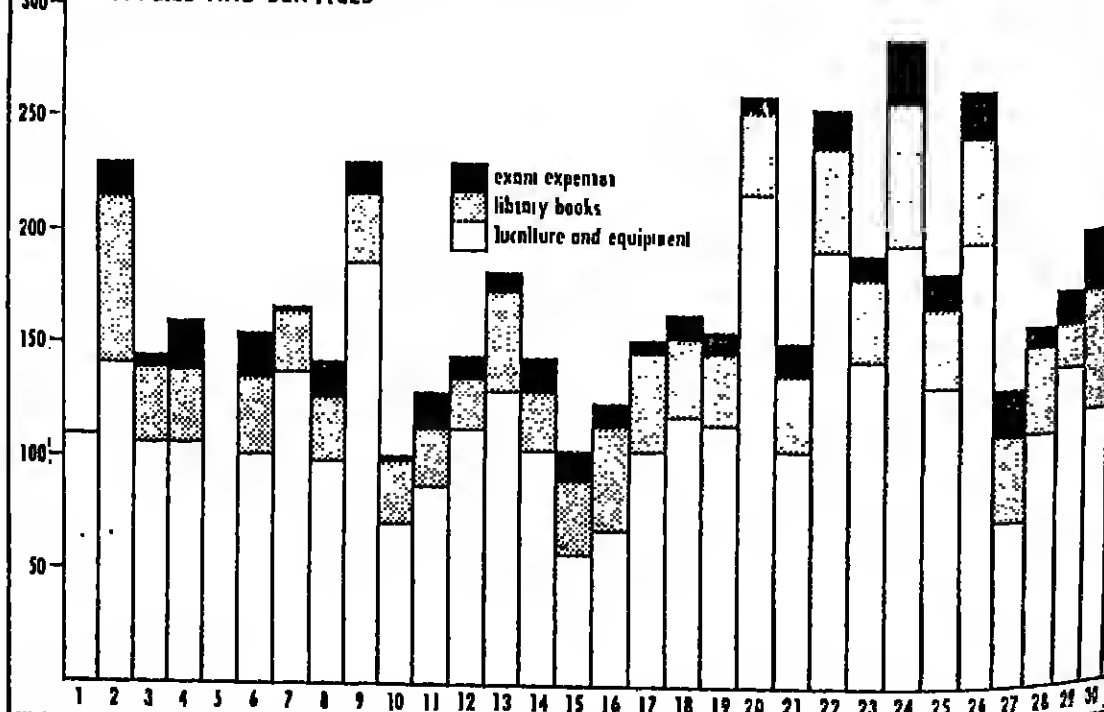
with spending of £15,000 and Birmingham apparently did no entering—are also given alongside the more serious costs of upkeep, premises and grounds, rates bills and office expenses.

In the last few years similar statistics have been produced by the finance officers for confidential use by their own group and the polytechnic directors. This is the first time that the information has been made publicly available.

In a special briefing document issued with the report the group emphasizes the enormity of the cost of maintaining the polytechnics. In the 1977-78 financial year their share of the advanced further education pool—the system for dividing the cost of this sector between local authorities—totalled £250m.

The report is available from the chief finance officer, Sheffield Polytechnic, Pond Street, Sheffield, price £1.

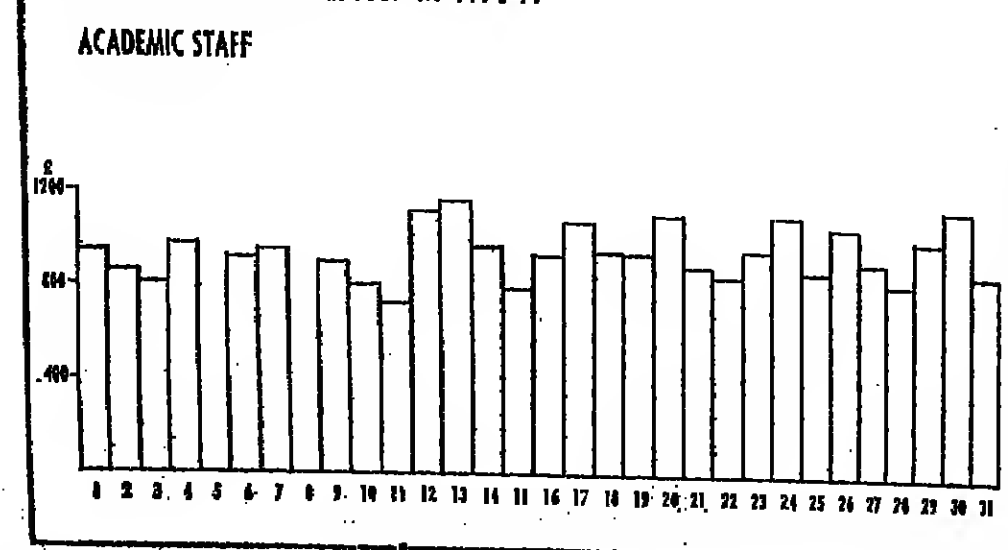
ESTIMATED EXPENDITURE PER STUDENT 1977-78 SUPPLIES AND SERVICES



KEY TO THE NAMES

1. Birmingham, 2. Brighton, 3. Bristol, 4. Hull, 5. Hull, 6. Kingston, 7. Lancaster, 8. Leeds, 9. Leicester, 10. Liverpool, 11. City, 12. Midwiche, 13. North East London, 14. North London, 15. North London, 16. South Bank, 17. Thames, 18. Manchester, 19. Newcastle, 20. North Wales, 21. Oxford, 22. Plymouth, 23. Portsmouth, 24. Preston, 25. Sheffield, 26. Sunderland, 27. Teesside, 28. Trent, 29. Wales, 30. Wolverhampton, 31. Ulster.

ACTUAL EXPENDITURE PER STUDENT 1976-77 ACADEMIC STAFF



ESTIMATED EXPENDITURE PER STUDENT 1977-78 ACADEMIC STAFF



Clive Jenkins describes how universities ought to move towards extending industrial democracy

"This report recognises that collective bargaining is and will continue to be the central method of joint regulation in industry and the public services, but there are a number of specific questions of close concern to workers which are not being effectively subjected to joint regulations through the present process of collective bargaining, and additional forms of joint regulations are therefore needed."

(Industrial Democracy: Statement of policy endorsed by the 1974 Trades Union Congress of the TUC, submitted to the TUC by the Bullock Committee of Inquiry on Industrial Democracy)

But who employs whom? The Victorian entrepreneur could hire and fire but in Britain's universities more subtle forms of preference are just as effective. So how do we bring about the greater involvement of people and their representative institutions into higher education?

For the academic year 1978-79 £1,190m will go to the universities in recurrent grants; a further £41.1m will be provided by the Government to pay for furniture and equipment and the universities will raise something like an additional 20 per cent of recurrent income via local authorities in the shape of manumission awards, which represent a further claim on public funds. Universities will have 277,000 students during 1978-79 and it is anticipated the figure will rise to 300,000 by 1981-82.

So public investment in this area is considerable, and the importance of universities in training the industrial and commercial cadres is central. Their role in national research cannot be overstated. For this reason, if for no other, it might be imagined there would be a great deal of democratic involvement in their running. The opposite is the case.

Universities stand in a unique position: while they depend almost entirely on public funds for their existence, and what they do in terms of education and research is critical for the nation, there is no democratic involvement in the sense that either the work force or the community are effectively involved at all. In practice, universities represent one of the last enclaves of uninhibited authoritarianism and privilege in this country. It is a situation now under scrutiny and challenge and one which cannot be allowed to continue unaltered.

I want to contemplate both the position of the separate universities and the role of the University Grants Committee. Such consideration is timely in following a report on industrial democracy in universities published by the Committee of Vice-Chancellors and Principals in March, 1978. This illuminates, perhaps in a way not intended, the current balance of forces.

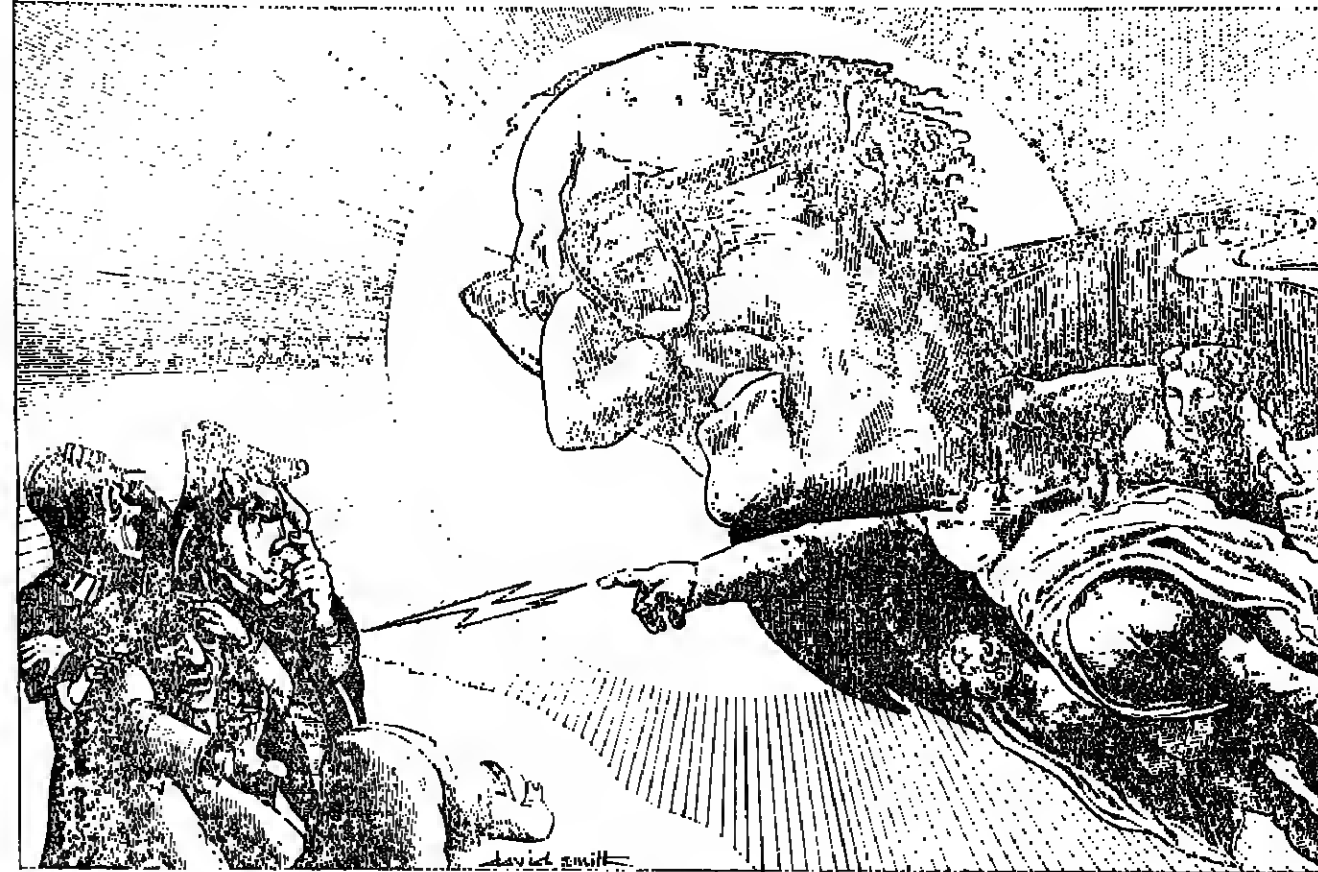
Readers of *The Times* will know that the question of industrial democracy is now the subject of continuing debate in the run-up to the publication of a "compromise" White Paper on companies. The major report was that of the Committee of Inquiry on Industrial Democracy chaired by Lord Bullock and presented in January, 1977. In turn, this generated an examination of the situation in the public sector. For universities the similarity ends there. The now historic Bullock Report dealt with the private sector but included public-owned companies. It called for an extension of the political franchise into the workplace.

As part of the general examination, in August 1976, the University Grants Committee invited the CVCP to help in establishing the scope for the extension of industrial democracy to the universities. This followed an initiative by Mr Gerry Fowler, MP, then Minister of State for Education and Science, who had written to the UGC in July 1976 for help in obtaining information about the universities. In so doing, Mr Fowler was at pains to emphasize that he was not seeking this information "in connection with the Bullock inquiry into the private sector, but in relation to the parallel studies which were being undertaken in the public sector". The vice-chancellors set up a working party, and it is here that the first and most significant error occurred.

The Association of Scientific, Technical and Managerial Staffs believes that a view of industrial democracy in the universities cannot be developed without looking at the role of the UGC itself and also at the composition of the governing bodies of the separate universities. This must include an analysis of the social composition of each body—how their members are elected or appointed, their terms of office, liability to recall and the involvement of recognised trade unions and the community at large. All this can only be done in an independent way, through an independent inquiry in which all the parties interested (including the CVCP) could give evidence and be subject to examination and discussion. No group of individuals so clearly involved with the outcome as the vice-chancellors committee could be expected to report adequately—and they have

Whenever any problem affecting universities occurs the first, last and sometimes the only defence of the entrenched powers is university autonomy. Inviting the UGC to assist, the Ministers recognized that "The autonomy of universities does, of course, put them in a different position from other bodies for which Ministers have a measure of responsibility", and once that was conceded, the end result was pretty well predictable. Briefly, our higher educational system is dominated by an educational establishment and elite closely linked with the major business and commercial interests of this country, conservative in outlook, backward in performance, and able to do pretty much as it likes without scrutiny. Certainly in their approach to the large numbers of staff employed, many institutions are both patronizing and anti-trade union.

A detailed examination of the social composition of



Unions attack 'last enclaves of uninhibited privilege'

We assert that the UGC's role, so far totally ignored in the consideration of industrial democracy in universities, should be examined. The UGC was established by a Treasury Minute in 1919. Its terms of reference (they were extended in 1948) are "to inquire into the financial needs of university education in Great Britain, to advise the Government as to the application of any grants made by Parliament in meeting them; to collect, examine and make available information relating to university education throughout the United Kingdom; and to assist, in consultation with universities and other bodies concerned, the preparation and execution of such plans for the development of the universities as may from time to time be required in order to ensure that they are fully adequate to national needs".

The situation needs detailed examination and by an independent body. Universities are considerable employers and the question must now be asked: how can the representatives of the trade unions in universities be brought into the controlling bodies of the separate institutions in such numbers and in such a way so that, together with elected representatives of the community, they can have an identifiable and legitimate voice in the governance of the separate institutions? Do I need to say that such a presence would not interfere with academic freedom or research?

The governing bodies of universities can no longer be reserved for unrepresentative persons and the general movement towards a situation where working people, through their organizations, have much more direct control over their working lives will have to be reflected in the university power structures sooner or later. In their report the CVCP recognizes (paragraph 48) "the importance of a university retaining a majority of lay members on the court and council so as to properly discharge its functions of management and accountability". Having confirmed this view, they surely must then accept that such members cannot continue to be hand-picked representatives of the local business and commercial community and that a national and proper development of democracy must mean involving large numbers of trade unionists working in the universities.

Of course, the vice-chancellors do not want that; they say: "We recommend, as a matter of principle, that where it is agreed that members of non-teaching staff should be elected to council, the election should be organized in such a way as to ensure that the members will be representative of all staff. We recognize this is opposed to the general wish of the unions, but we have arrived at the recommendation on the basis of arguments which we see as paramount." (Para 49, CVCP Industrial Democracy Report)

Blatantly, this committee fears the union organizations and therefore has to indulge in subjective and special pleading. We as a union are not looking for token representatives of members of courts or councils ultimately to be enmeshed and then merged into procedures and protocol. We are looking for an independent trade union position with the representatives concerned reporting back to their constituents through their organizations with the resources and ability to take an independent line and, where necessary, effect policy changes. That would be an enormous advance over the present situation, where the majority of courts and councils report to nobody and follow their own particular interests—cynical and almost self-perpetuating.

One could not expect the CVCP to look at this question objectively, and the way Ministers hounded the situation in the first place by referring the matter to the UGC simply put control of the outcome into their hands.

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With terms of reference like that, who needs more? I believe the UGC must become, very quickly and simply, the major instrument of industrial democracy in the universities. In May, 1976 (the last time we did a detailed examination), Sir Frederick Dainton was chairman and there were 17 other members, 12 of whom were professors and the rest (with the exception of Sir Donald Barron, listed as Chairman of Knowledge Management Limited) closely and directly connected with higher education. Notably impugned the integrity or ability of any member of the committee, but we maintain it must be more broadly based and representative.

Representatives of the trade unions recognised by the universities for collective bargaining purposes should be represented in equal numbers with those appointed for other reasons. Even if the size of the committee were doubled, it would not be over large.

The special position of the AIT should also be accommodated. The appointment of representatives of people working in universities also having close contact with other aspects of our national economic life could only improve the situation.

So, we in the ASTMS want to see industrial democracy introduced into the United Kingdom's universities in the widest possible way. The Government is in a good tactical position, given the will, to do so quickly. We repeat, we do not want to interfere with the freedom of universities to conduct their teaching and research work, but we have reached the point where the whole structure requires radical modernization and democratization.

We ought to do two things and at once: the University Grants Committee could and should be reconstructed quickly. Trade unions in universities wish to be represented should have seats on that committee in substantial numbers; we want a separate independent inquiry into industrial democracy in universities and the way they are managed. Perhaps we could adapt the terms of reference given to Lord Bullock, so that "... accepting the need for a radical extension of industrial democracy to the control of the universities of the United Kingdom by means of representation on governing bodies and the UGC, and accepting the essential role of trade union organizations in this process, in consider how such an extension can be best achieved taking into account in particular the Trade Union Congress report on Industrial Democracy". It might be painful but the complaint is chronic.

The author is general secretary of the Association of Scientific, Technical and Managerial Staffs.

John Wilson uncovers a national pattern of shrinking classes

The figures that show how adult opportunity is being curtailed

Adult education is arguably the most important educational provision in the country, despite its precarious statutory position. It is so because it is the only truly voluntary form of education which is undertaken for its own sake and not because parents, the law or the needs of the economy for pieces of paper to show competence for employment demand attendance.

In fact, in some good years at least, enrolled more students than all other forms of post-school education put together and, certainly, over the years, infirms and enriches the lives of a substantial proportion of the population. It has no entry requirements, no prerequisites like high IQ, A levels or the right background—simply a wish to participate and to learn.

Nevertheless, despite its pervasiveness, its influence in the life of the community at large, adult education rarely hits the news in the way that smaller, much less significant movements do, like Mrs. Whitehouse's Viewers and Listeners Association, the Friends of the Earth or the National Front. This is perhaps because the interests of the silent majority who are involved in the process of continuing education through the highly popular adult education service provided very largely by the local authorities see themselves as modest and understanding recipients of the beneficence of the powers that be.

They are grateful to be provided with such continuity of education as fall from the tables of the privileged few (comparatively speaking) who attend the universities, polytechnics, and colleges to learn "useful" things for the good of society. It is as if it became a fuller, more enriched and creative human being were somehow a reprehensible drain on the nation's resources—a waste of the less than one per cent of the educational budget allowed for the non-earner or student of the adult population for or the pretensions to higher education.

The Educational Centres Association, an association which represents over 100 of the many adult education centres throughout the country and which works as a participative partnership between the students as consumers and the full and part-time staff as providers of adult education, not merely for the half-million students enrolled in its non-member centres but for the silent majority who have no organized voice and for adult education generally.

Over the past few months, despite its almost non-existent resources, the Association has been

monitoring, with the help of the National Institute of Adult Education (of which the ECA is a corporate member while the director of the NIAE sits on the ECA executive) the press coverage of adult education throughout the country from the Channel coast to the northern fens of Yorkshire and Lancashire and across the water to troubled Ulster where adult education plays a role in the difficult lives of Belfast women lacking in confidence and with a need to broaden their horizons.

If the picture which emerges from the press continues to be representative of developments generally (and there is little reason to suppose otherwise) then the situation is far from encouraging for a service which has taken such a financial battering in recent years—and this in the face of the ill-fated Russell Report of 1973 which advocated a doubling of resources for adult education and setting student fees, or contributions as it preferred to call them, to a nominal amount.

Last year's disastrous 40 per cent rise in class fees recommended by the Education Secretary, Shirley Williams, and eagerly implemented by many LEAs, including many of the fees were already scandalous in the light of the Russell recommendation are beginning to damage and destroy the adult education service throughout the country.

A fees survey by the community centre in Kent, reported in the *Kent Evening Post* (November 25, 1977) that fees which had risen to 30p an hour had lost substantial numbers of full-time students, over the past two years, making for "a service for the better-off" and where the length of courses had been cut to preserve the illusion of a reasonable fee per course in order to attract the ordinary student.

On the same day *The Brighton Echo* carried an article headed "Adult education: a crisis of confidence" detailing the loss of adult education classes by Brighton City. The chairman of the local advisory committee for adult education reported that "there had been a staggering reduction in enrolment at Brighton and Lighthelm" and that fees had increased by 100 per cent.

"I have the feeling it may be the cost," said Mr. Thomas, the advisory body chairman.

In Warwickshire *Birmingham Evening Mail* (January 4) numbers dropped by 47,000 after a 40 per cent slash in the adult education budget and a fee increase of more than 30 per cent, while in Derbyshire protests were sent by the Melbourne Parish Council to Derbyshire's director of education

about the using of spring term classes by 50 per cent (*Derby Evening Telegraph*, December 9, 1977). Students of the Adult Education Centre, St. Helens, Merseyside, were told, according to a student's letter published in *The Guardian* (December 13, 1977) that classes for arts or "non-productive" activities were to be abolished.

Back in Gravesend (Gravesend is the district name, taken by the centre as it is responsible for provision throughout the district) questions were being asked by the prospective Conservative candidate (also a county councillor on the education committee) about the financial reasons for the closure of the adult education centre for widows (Gravesend and Thurford Reporter, December 2, 1977) while not only have fees throughout Hereford-Worcester risen as part of the county council's economy measures, but free admission for relevant pensioners has been abolished (*Hereford Evening News* (December 6, 1977).

Swadmore Centre in Leeds, one of the few independent centres left in the country, which was one of the original founders of the Educational Centres Association, is struggling to keep staff and funds to the services of their full-time adult education principals. The "several picture" shows quite clearly the disconcerting direction of adult education today as indicated by elected authorities; that financial reasons are increasingly the criterion of reducing rather than that of educational need; that the service is increasingly being regarded as a luxury privilege for the better-off and not for the poorer sections of the population; and that, except for those who are let in freely or at reduced rates as a charitable gesture towards their ill-health or other disadvantage, that there is little or no commitment by many local authorities in the Department of Education and Science to the concept of continuing education for all, irrespective of their ability to pay.

A similar "success" story in West Sussex, where the West Sussex Gazette (December 1, 1977) noted a 12 per cent increase in fees, despite a 25 per cent increase in fees already high in the nationwide fees, already being a one which hides a disturbing trend. Adult Education Adviser, Eddie Birch, claimed emphatically that "despite all the pressure to reduce fees, the centre is committed to a further commitment that for a relatively small number (my emphasis) the service seems to be providing needed opportunities for more and more people in the West Sussex community." But he says the editorial of the West Sussex Gazette, "The Understatement" comes into perspective when viewed against the fact that the West Sussex County Council, less than 10 miles from the neighbouring authority, Kent Council, has just one of its adult education

centres. Putting the whole question in proper perspective, Richard Freeman, executive director of the National Education College, argued at a Birmingham conference (THES, December 9, 1977) that



Free rises have hit adult learning.

centres, and the question of quality is further raised by the apparent intention at the West Sussex County Council to discontinue the services of their full-time adult education principals.

The "several picture" shows quite clearly the disconcerting direction of adult education today as indicated by elected authorities; that financial reasons are increasingly the criterion of reducing rather than that of educational need; that the service is increasingly being regarded as a luxury privilege for the better-off and not for the poorer sections of the population; and that, except for those who are let in freely or at reduced rates as a charitable gesture towards their ill-health or other disadvantage, that there is little or no commitment by many local authorities in the Department of Education and Science to the concept of continuing education for all, irrespective of their ability to pay.

Bill Hoadley of the National Association of Teachers in Further and Higher Education, who has recently been appointed director of the Centre for Information and Advice on Educational Disadvantage, claimed (The Teacher, December 9, 1977) that in the setting up of a new literacy unit to continue the work of the ALRA literacy organization the Government had given him little and for no short a time. The same reservations were expressed in an interview with Education on the same date.

Putting the whole question in proper perspective, Richard Freeman, executive director of the National Education College, argued at a Birmingham conference (THES, December 9, 1977) that



despite universal secondary education and the opening up of further and higher education, the quality of education remains as far away as ever from the standards of the past. The Government is not doing enough to ensure that the quality of education is maintained.

Provisional figures issued by DES in Christmas 1977 (THES, December 23, 1977) from the source with the most reliable figures show that between 1975 and 1976 there was a 10 per cent increase in enrolments in adult education, but a 15 per cent increase in the number of full-time students.

It is true that students get together as consumers in just one of the many ways in which the ECA's voice for adult education is heard. The ECA's voice is heard in many other ways, including its work in the field of continuing education, its work in the field of adult education, and its work in the field of adult education.

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It is increasingly recognized that much of the Northern Ireland crisis may be a by-product of things to come in Britain. Alienation from government institutions, street violence, communal tension, new pressures on the police—in all these areas Ulster has had to innovate in ways not known to the rest of the United Kingdom. The potential parallels for Britain are disturbing; and some of the most serious are the unemployed, and especially the younger generation.

When unemployment is concentrated in one area, it is not surprising that it has a special authority. The search for jobs has been a fact of everyday life since the inception of the Northern Ireland state and has been a common denominator of the life of the people. It is also a fact of life that the areas of greatest social deprivation are also the areas of greatest unemployment, and especially the younger generation.

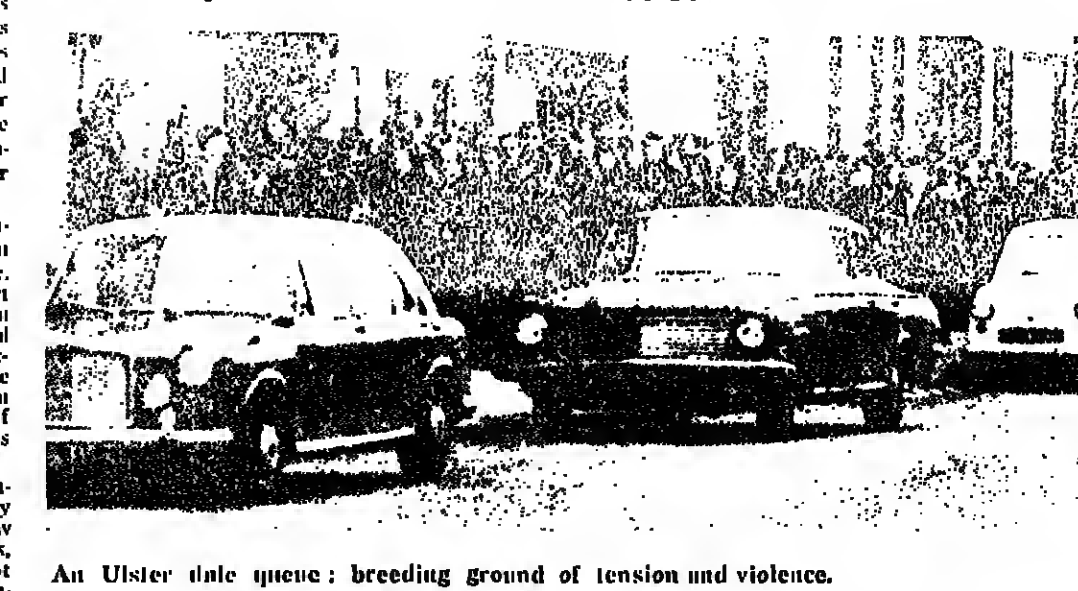
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Bogside today . . . Birmingham tomorrow?

David Bleakley warns that unemployment could breed Ulster-style alienation in the rest of Britain



An Ulster style queue: breeding ground of tension and violence.

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Academic books: the exception to the rule about 'real' prices

Peter Curwen sees little chance of reductions whether the Net Book Agreement is abolished or not

Over the past few years widespread concern has been voiced in education circles over the allegedly rising prices of academic books. The most tangible reference to this concern has been a report to the Price Commission in August 1977, with respect to the price of books in the education sector, and in particular the price of books in the education sector. This reference has been a landmark in the history of the Net Book Agreement of 1962.

What has happened in practice, however, is that the book trade hierarchy has chosen to make an issue of the report, particularly through the medium of the Publishers' Association and the Booksellers' Association. In essence they are arguing that the NBA is forever sacrosanct, in spite of the fact that it constitutes one of the only two exceptions allowed since the passing of the Resale Prices Act of 1964 to the general rule that individual resale prices are to be determined by the forces of competition in the market.

Now the most immediate issue will be the question of whether it concerns educationalists whether prices would on average rise or fall were the agreement to be terminated. In its turn this issue is related to one of the primary concerns of the Price Commission, which is in determining the true trend of "real" book prices, that is prices after due allowance has been made for the effects of inflation.

This latter question is currently the subject of controversy between the Publishers' Association and myself. In its own submission to the Price Commission the association claims that in real terms the prices of all categories of books have, on average, declined throughout the 1970s. This conclusion is based upon two apparently similar sets of data, one produced by *The Bookseller* and the other by the Library Association. Unfortunately, as *The Bookseller* itself now agrees, the former set of data has been misinterpreted and what it actually shows is that real book prices have risen considerably since the beginning of 1975. This view of price trends is shared by the Library Association's Research Unit, who have shown that the increase in real prices has been particularly marked with respect to academic books.

The likelihood of price reductions across the board is extremely slim, not least because profitability among stockholding booksellers is very poor and they will be glad to avail themselves of any opportunity to improve their margins. Furthermore, although the majority

of the readers of this supplement may find this hard to swallow, most less-than-brand-new educational books are undoubtedly underpriced at the present time when one takes account of the price of paper and the cost of production. In the past few months, all in all, therefore, the academic community is most unlikely to profit from the abolition of the NBA, although the avid buyer of popular fiction might well have cause to cheer.

The views from the book front are therefore less than happy. The Price Commission, they, of course, have the power to forestall further price rises but it is rather unlikely that they will conclude that educational books are an overpriced commodity. Alternatively, even if we have been going through a period of rising real prices during the past few years, a period of retrenchment on the prices front may possibly follow if publishers, in order to meet the need for reducing costs such as printing in the Far East (or cutting royalties!), find it in the educational books world, of course, that the recent rapid decline in the ability both of individuals and of libraries to fund their holdings of books will be reversed other than temporarily by the events described above then I fear that they are almost certainly in for a long disappointment.

The market is a crueler lecturer in economics at Sheffield City Polytechnic.

Gerard Macdonald starts a two part look at establishing an Open College on the model of the OU

Why an Open College must be different

In the next few years we are likely to have a national Open College on the model of the Open University. The OU is our one really successful educational innovation of the post-war years; but I want to suggest, in this article, that it would be a mistake for an Open College to follow that model too closely.

To decide whether the Open University is replicable in the clear about its strengths and weaknesses. The real intellectual leap was, of course, the original acceptance that a respectable university could go out to the students, rather than bringing students to the university. From this there follows a revaluation of university teaching. Universities have not, traditionally, been much interested in teaching. It is up to students to make sense of their own learning and to supplement them with what can be learned from conversations or from

books. Learning is pleasantly diffuse. Those who cannot cope with education. On the other hand, some students—and almost all university teachers—do cope very well. The disadvantage is cost. It is expensive to maintain students long enough to make up for the civilised inefficiency of their teaching. And expensive education is inevitably restricted (on essentially non-economic grounds) to relatively small groups of people.

The Open University has significantly widened this restricted access to higher education. To compensate for the students' lack of time and conversation the OU has had to take teaching more seriously. Though it is given to transmissible structures in the various disciplines. Presentation is a matter for debate, trial and revision. Unusually for higher education, student failure reflects on the university—not just on the student.

There are, though, limitations to the Open University technique. Students may not need formal qualifications but they do need some preliminary knowledge of their subject; or, at least, they need more than their courses initially provide. Course material is not easily accessible to the completely uninitiated. Further, students need to have the

development of a particular cognitive style: one which copes with a quite high degree of abstraction and which depends on learning from continuous texts.

These conditions seem to be inherent in the Open University's chosen clientele; but an Open College will have to open very different. Its courses should start from an assumption of ignorance: each new term and idea will need explanation will have to be explained. Course materials are generally well organized, but a not well enough for the students of an Open College. Nor will continuous work as a main support for learning. So far as printed materials go, the Open College will have to develop a more iconic style, a close meshing of illustration and type in which neither can be independent of the other.

In reply to print is, in itself, a limitation. An Open College will need, much more than the Open University, to use some form of recorded television as a principal teaching medium. In this area technical changes are making the Open College idea a much more practical possibility. Reasonably effective video-cassette recorders and videodisc players now exist. They are likely to get steadily cheaper

over the next few years, as their design improves and their market expands. An Open College should plan for the time, early in the 1980s, when retrieval television is dependable and cheap enough for player rental to be a necessary part of students' fees.

Hardware is not, though, the only problem with educational television. It is important that the medium should be widely available and that it does not dominate the process of course development. Television still has a long way to go before it can be a truly educational medium. Broadcast television, as a result, is hardly ever going to be a serious medium for the Open College. Programmes are made by highly creative directors seeing the exercise as a first step on the road to displacing Bertolucci; or, at the other extreme, by educational technologists, who work in the faith that television for intelligent adults is a substitute for intelligent conversation. An Open College will need programme makers who can come in terms both with the content of course material and with its technical presentation. This is, to repeat, far more important for a college than it has been for the Open University. And if—when the fourth channel goes commercial, recorded television will be the only option for the Open College.

The crucial question will not be whether an Open College can afford its keep as a producer of television programmes, but whether more should be allowed to do anything more than that. This matter of political cost should be taken up to a later article on the limitations of an Open College.

The author has conducted research into the use of learning materials and is now writing a book on the redistribution of knowledge.

Finally, it is worth looking at the crisis of course development. There is a widespread feeling that recorded accessible course material is essential to develop into more complex material. It is not. Development time, and therefore cost, increase in proportion to the accessibility of teaching materials. An Open College which reaches these standards of accessibility will find it difficult to develop into more complex material. This does not mean that it will depend simply on television. The management of the Open College will have to be a balance of television and other media. Programmes are made by highly creative directors seeing the exercise as a first step on the road to displacing Bertolucci; or, at the other extreme, by educational technologists, who work in the faith that television for intelligent adults is a substitute for intelligent conversation. An Open College will need programme makers who can come in terms both with the content of course material and with its technical presentation. This is, to repeat, far more important for a college than it has been for the Open University. And if—when the fourth channel goes commercial, recorded television will be the only option for the Open College.

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BOOKS

Portrait of a prejudiced genius

Heroic forms

Hardy's anguished consciousness

Public life and private morality

the external environment and of the perception of reality from a personal perspective; and by emphasizing the characters' inner life.

Unlike Sir Richard Southern, Hamming chooses to contrast the chivalric romance with hagiography in particular *Alchard's Historic of Christianity* and the open *Life of Christina Markgate*. Telling vivid and roasting romance with epic does occur, as when he points out that each episode in the romance is told with warlike language, an epic action which unifies and frames all separate deeds.

From the two Latin histories Hamming proceeds to a clear survey of the evolution of the chivalric romances, then to two extended, traditionalizing analyses of critical

A. O. J. Cockshu

Both books run on many pages which I shall want to refer several times in the future, so it is doubly irritating that neither is provided with an index.

Ganini Saigad

The failure to provide a bibliography is a sad omission; especially, as scattered among the abundant notes, are references to such recent, important scholarly works of American origin not yet as well known as they might be to Europeans. And the apparently serious gaps in Hauntings's reading would then be seen more clearly.

Kenneth Vart

Thus, in a chapter on rhythm and style, she does not hesitate to involve us in some detail of analysis so that she may suggest, and then demonstrate, the complex interplay of rhythm, alliteration and syntax by which the style of this poem may be defined. Nor does she al-

only a pity that the book advertises its concern "with English poetry in its social context": little attempt is made to present that context, except to enigma. But some of the myriads surrounding this monnered, fastidious verse are so interesting, so revealing of its scholarly manner, provenance, and what D. A. Pears has recently characterized as "the air of libraries about it." For the obscurity of its lurid German past, its present is surely that of a well-documented, learned, and with practical needs for lecturers, texts, and with learned, antiquarian inclinations.

Elizabeth Sale

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AN ENEMY**

Coming June
**Art, An Enemy of
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Roger Taylor,
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Series"

HARVESTER PRESS

BOOKS

Identity crises

Leo Rogers

J. B. Guddard

Leo Rogers is senior lecturer in mathematics at Dighy Stuart College;
Garnini Salgado is professor of English at Exeter University;
Professor Elizabeth Salter is at the centre for medieval studies, York University.

Universities continued

Rhodes University

Grahamstown South Africa

Applications are invited for the following posts—

ACADEMIC

Professor and Head of the Department of English
(from January 1, 1979)

Professor/Senior Lecturer in the Department of Mathematical Statistics
(from January 1, 1979)

Senior Lecturer/Lecturer in Law
(from January 1, 1979)

Senior Lecturer/Lecturer in Psychology
(from January 1, 1979)

Lecturer/Junior Lecturer in Organic Chemistry
(as soon as possible)

Lecturer/Junior Lecturer in Pharmaceutical Microbiology
(from January 1, 1979)

Junior Lecturer (Female) in Physical Education
(from January 1, 1979)

NON-ACADEMIC

Administrative Officer (Admissions)
(from September 1, 1978)

Administrative Officer (Examinations)
(from September 1, 1979)

The salary scales are—

PROFESSOR

R10,800 by £450 to £12,800 by £800 to £13,800

SENIOR LECTURER

R6,460 by £80 to £9,800 by £450 to £11,250 per annum

LECTURER

R6,300 by £80 to £9,180 per annum

JUNIOR LECTURER

R4,920 by £80 to £5,100 by £240 to £5,300 by £80 to £6,800 per annum

ADMINISTRATIVE OFFICER

R5,100 by £240 to £6,300 by £80 to £9,180 per annum

(Note: £1 starting salary approximately £1.55)
The initial salary in each case will be determined according to qualifications and experience. In addition a supplement of 15% per cent on the above scales and a vacation savings bonus are payable. The successful applicants will become members of the University's pension and medical aid schemes. Further particulars and application forms may be obtained from the South African Universities Office, Chichester House, 278 High Holborn, London. One copy of the application should be sent to the South African Universities Office and one copy, together with a recent photograph, direct to the Registrar, Rhodes University, Grahamstown, South Africa by June 17, 1978.



UNIVERSITY OF LONDON COMPUTER CENTRE

The University of London Computer Centre provides a regional computer service to the University of London and to Universities in the South East and South West of England. The Centre is equipped with Control Data 7600, 8600, 6400 and CYBER 72 computer and supports a large communications network of over 50 remote batch terminals and 30 keyboard terminals.

TELECOMMUNICATIONS

A Programmer/Analyst

is required to join our operating systems teams and to help in the development and maintenance of the SCOPE 2.1.4 and NOS/BE operating systems. An exciting programme of development is planned which includes a major commitment to networking and new protocols. Applicants should have a sound experience in assembly language programming and with telecommunications software.

SYSTEMS

A Programmer/Analyst

is required to join our operating systems teams and to help in the development and maintenance of the SCOPE 2.1.4 and NOS/BE operating systems. An exciting programme of development is planned which includes a major commitment to networking and new protocols. Applicants should have a sound experience in assembly language programming and with telecommunications software.

QUALITY ASSURANCE

A Programmer/Analyst

is required to join the Quality Assurance Unit at ULCC. This Unit is responsible for the integration of operating systems modifications and for the systematic testing of the operating systems, the public compilers and applications software. This Unit is also responsible for monitoring the quality of service. Applicants should have at least one year's experience in programming.

USER SUPPORT

A Programmer/Analyst

is required to join the teams engaged in the implementation, maintenance and support of application packages, including an accounting suite, and in the provision of a professional advisory service. Applicants should have a good knowledge of at least one programming language, preferably FORTRAN. Applicants for all posts should be educated to degree standard preferably with post-graduate qualifications. The ability to communicate clearly both orally and in writing is essential.

Candidates may be considered who have relatively little practical experience of computing, but who are very well qualified in some other discipline and who wish to make computing their full-time occupation. Salary will depend on qualifications, experience and age, but will be within the range £3,180-£8,176 plus £450 London allowance.

Holidays: 6 weeks per year plus Bank Holidays and 6 extra days.

Modern offices conveniently located for London Transport Services and Main Line Stations. Loans made to purchase Annual Season Tickets.

Further details and application forms are available by phoning Veronica Minards 01-405 8400 extension 239 or by writing to the Secretary, ULCC, 20 Guildford Street, London WC1.

Closing date for completed application forms 9th June, 1978.

DURHAM

ST. JOHN'S COLLEGE

PRINCIPAL

Applications are invited for the post of Principal of St. John's College, Durham. The successful candidate will be responsible for the management of the College and the academic standards of the students. The salary is £12,000 per annum.

For further details and application forms, please contact the Secretary, St. John's College, Durham, or write to the Secretary, St. John's College, Durham, or write to the Secretary, St. John's College, Durham.

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UNIVERSITY OF GUYANA

Vacancies

Applications are invited for the following positions.

1. Department of Mechanical Engineering—PROFESSOR

To lecture and conduct research in Lubrication and Wear, Metallurgy, Manufacturing Technology, Fluids, and related areas. Applicants should have industrial experience and a Ph.D. degree. Experience in Fluid Technology, Steel Making and Refractory Materials would be an advantage. Applicants with experience in areas of Metallurgy should be eligible for the post of Fellow/Member of the Institute of Metallurgy.

Applicants should preferably have a Ph.D. degree, be holders of a Master's degree with relevant industrial experience would be considered.

2. Department of Economics—LECTURER

The appointee would be required to teach in two of the following areas: Theory of Economic Planning, Industrial Economics, Agricultural Economics, Advanced Economics, International Economics, Labour Economics, Quantitative Methods, Public Policy.

Applicants should have a higher degree.

3. Department of Sociology—LECTURER

Applicants should have a higher degree, preferably a Ph.D. degree, and should have experience in teaching and research in the field of Sociology. The successful candidate will be required to teach in the field of Sociology and to conduct research in the field of Sociology.

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Universities continued

RESERVE BANK OF AUSTRALIA
ECONOMIC AND FINANCIAL RESEARCH FUND
FELLOWSHIPS IN
ECONOMIC POLICY
1979

The Reserve Bank of Australia invites applications for Fellowship in Economic and Financial Research Fund. These awards, which are financed from the Bank's Economic and Financial Research Fund, are provided to support research on applied aspects of Australian economic policy.

Applicants should have a Ph.D. degree, be holders of a Master's degree with relevant industrial experience would be considered.

Applicants should have a higher degree, preferably a Ph.D. degree, and should have experience in teaching and research in the field of Sociology. The successful candidate will be required to teach in the field of Sociology and to conduct research in the field of Sociology.

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THE UNIVERSITY OF LANCASTER

DEPARTMENT OF ECONOMICS

Applications are invited for three lectureships in the Department of Economics. Preference will be given to candidates with research interests in the Economic History of Modern Europe, particularly Russia, and Modern Britain.

ECONOMIC HISTORY (2 posts)

QUANTITATIVE ECONOMICS (1 post)

Candidates will be persons interested in developing most of their time in teaching, research within the areas of economic history and other mathematical methods in their application to economic problems. Their honours degree will typically be in Economics with substantial knowledge in statistics and/or econometrics or in Statistics followed by further study or research in an economic application. Some experience in teaching quantitative methods to economic undergraduates would be an advantage. The post will involve teaching at all levels in the quantitative field.

The Department shares joint major degree courses, inter alia, with the Mathematics Department, which has a statistical section, with Operational Research and with Accounting and Finance. The University has extensive Computing facilities. All members of the Economics Department are normally expected to be willing to teach economics classes at first-year level.

Further particulars may be obtained (requesting references L44/0) from the Establishment Officer, University House, Lancaster LA1 4YW. In whom applications (5 copies), naming three referees, should be sent not later than 15 June, 1978.

Please state which post you are applying for.

Closing date: 30th June, 1978

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PRINCIPAL, FUTURE II in DATA PROCESSING to accept leadership role for the teaching and development of this field. Includes two A.A. degree courses and activities in research and consultancy. An appropriate level of academic, professional, social and industrial experience desirable.

Salary scale: \$7,047 to \$14,444 per annum.

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SCIENCE AND MATHEMATICS
DEPARTMENT

LECTURER GRACE
MATHEMATICS AND
COMPUTING

Applicants are invited to submit a resume which will include training mathematics and computing in a wide range of areas, i.e., A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO,QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UU, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.

Further details and application forms can be obtained by writing to the Principal, Mathematics Teacher Training Scheme, Worcester Roadway, Worcester, Gloucestershire, or by telephoning 01902 86711. The closing date for applications is 11.11.81. An acknowledgment of this advertisement will be sent to all applicants.

Further details and forms of application from:-
The Dean of Admissions
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Wells Road
Ikley
West Yorkshire LS29 9RD
Tel: 01145 609010

The College, formed by the amalgamation of Southern and Poole Colleges, is to be organized into two Faculties. That of Business and General Studies will contain five Departments and total more than 120 academic staff.

The Faculty Head will be responsible for the management of the five Departments within the Faculty and for control of physical resources on one of the main College floors.

Applicants (male or female) must be graduates of the age of 25 with experience of managing a department or substantial unit in a large institution or in industry and must be interested in the application of modern educational methods to courses mainly of non-advanced standards.

Application forms and further information may be obtained from the Principal's Secretary, North Road, Poole, to whom completed forms should be returned by 16 June, 1978. (Previous applications resulting from an earlier advertisement will automatically be reconsidered.) The appointment will take effect from 1 January, 1979 unless earlier release can be obtained by the successful

